

REMARKS


In the outstanding office action, claims 1-7 and 9-27 were presented for examination.

The above amendments are made to more clearly claim the invention.

In view of the above amendments and the discussion relating thereto, it is respectfully submitted that the instant application, is in condition for allowance. Such action is most earnestly solicited. If for any reason the Examiner feels that consultation with Applicant's attorney would be helpful in the advancement of the prosecution, he is invited to call the telephone number below for an interview.


Respectfully submitted,

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**"VERSION OF AMENDED CLAIMS WITH MARKINGS TO SHOW CHANGES
MADE"**

~~20-~~ 28. (new) A method of speech recognition using a microphone to receive audible sounds input by a user into a computing device coupled to said microphone, said computing device having a program with ~~a~~-database information comprising (i) digital representations of known audible sounds corresponding to proper pronunciations of phonemes and associated alphanumeric representations of said known audible sounds corresponding to proper pronunciations of phonemes forming a first database and (ii) digital representations of known audible sounds corresponding to mispronunciations forming a second database, comprising the steps of:

(a) receiving said audible sounds in the form of an electrical output of said microphone;

(b) converting said electrical output corresponding to a particular audible sound into a digital representation of said particular audible sound;

(c) comparing said digital representation of said particular audible sound to said digital representations of said known audible sounds in said first and second databases to determine a match with the one of said known audible sounds most likely to be the particular audible sound being compared to the sounds in said database; and

(d) outputting as a speech recognition output the alphanumeric representations associated with said audible sound most likely to be said particular audible sound;

29. (new) A method as in Claim 28, further comprising:

(e) outputting an error indication in response to a match with a known audible sound corresponding to a known mispronunciation; and

(f) in response to a determination of error corresponding to a known type or instance of mispronunciation, giving the user the option of receiving speech training or training said program to recognize the user's speech pattern; and

(g) in response to exercise of said option, presenting an interactive training program from said computing device to said user to enable said user to correct such mispronunciation.

21- 31. (new) A method of speech recognition using a microphone to receive audible sounds input by a user into a computing device coupled to said microphone, said computing device having a program with a database information comprising (i) digital representations of known audible sounds corresponding to proper pronunciations of phonemes and associated alphanumeric representations of said known audible sounds corresponding to proper pronunciations of phonemes forming a first database and (ii) digital representations of known audible sounds corresponding to mispronunciations, forming a second database comprising the steps of:

(a) ~~forming a~~ generating said database information by (i) having a person, who normally speaks said known audible sounds properly, speak said properly pronounced known audible sounds, and digitizing said properly pronounced known audible sounds spoken by said person who properly speaks said known audible sounds; to form a first database of digital representations of said properly pronounced known audible sounds and (ii) having a person who usually speaks said known audible sounds corresponding to mispronunciations and digitizing said known mispronounced audible sounds spoken by said person who usually speaks said known audible sounds corresponding to mispronunciations to form a second database;

(b) receiving said audible sounds in the form of an electrical output of said microphone receiving speech to be recognized;

(c) converting said electrical output corresponding to a particular audible sound into a digital representation of said particular audible sound to be recognized;

(d) comparing said digital representation of said particular audible sound to be recognized to said digital representations of said known audible sounds in said first and second databases to determine a match with the one of said known audible sounds most likely to be the particular audible sound to be recognized being compared to the sounds in said database; and

(e) outputting as a speech recognition output the alphanumeric representations associated with said audible sound most likely to be said particular audible sound;

31. (new) A method as in Claim 30 further comprising:

(f) outputting an error indication in response to a match with a known audible sound corresponding to a known mispronunciation; and

(g) in response to a determination of error corresponding to a known mispronunciation, presenting an interactive training program from said computing device to said user to enable said user to correct such mispronunciation.

~~22- 32. (new) A method as in Claim 30, further comprising: A method of speech recognition using a microphone to receive audible sounds input by a user into a computing device coupled to said microphone, said computing device having a program with a database comprising (i) digital representations of known audible sounds corresponding to proper pronunciations of phonemes and associated alphanumeric representations of said known audible sounds corresponding to proper pronunciations of phonemes and (ii) digital representations of known audible sounds corresponding to mispronunciations, comprising the steps of:~~

~~—— (a) receiving said audible sounds in the form of an electrical output of said microphone receiving speech to be recognized;~~

~~—— (b) converting said electrical output corresponding to a particular audible sound into a digital representation of said particular audible sound;~~

~~—— (c) comparing said digital representation of said particular audible sound to said digital representations of said known audible sounds to determine a match with the one of said known audible sounds most likely to be the particular audible sound being compared to the sounds in said database;~~

~~—— (d) outputting as a speech recognition output the alphanumeric representations associated with said audible sound most likely to be said particular audible sound;~~

(e) outputting an error indication in response to a match with a known audible sound corresponding to a known mispronunciation; and

(f) in response to a determination of error corresponding to a known mispronunciation, presenting an interactive training program from said computing device to said user to enable said user to correct such mispronunciation using Lessac System techniques.

~~23- 33. (new) A method as in Claim 30, further comprising: A method of speech recognition using a microphone to receive audible sounds input by a user into a computing device coupled to said microphone, said computing device having a~~

~~program with a database comprising (i) digital representations of known audible sounds corresponding to proper pronunciations of phonemes and associated alphanumeric representations of said known audible sounds corresponding to proper pronunciations of phonemes and (ii) digital representations of known audible sounds corresponding to mispronunciations, comprising the steps of:~~

- ~~—— (a) receiving said audible sounds in the form of an electrical output of said microphone receiving speech to be recognized;~~
- ~~—— (b) converting said electrical output corresponding to a particular audible sound into a digital representation of said particular audible sound;~~
- ~~—— (c) comparing said digital representation of said particular audible sound to said digital representations of said known audible sounds to determine a match with the one of said known audible sounds most likely to be the particular audible sound being compared to the sounds in said database;~~
- ~~—— (d) outputting as a speech recognition output the alphanumeric representations associated with said audible sound most likely to be said particular audible sound;~~
- (e) outputting an error indication in response to a match with a known audible sound corresponding to a known mispronunciation; and
- (f) in response to the detection of repeated instances or a reliable single instance of pronunciation error, presenting an interactive training program from said computer to said user to enable said user to correct such mispronunciation.

24. 34. (new) A method of speech recognition as in claim ~~23~~, 33, wherein said presenting an interactive training program from said computer to said user to enable said user to correct such mispronunciation is optional and is performed when elected by the user.

25. 35. (new) A method of speech recognition as in claim ~~21~~, 33, wherein said user is presented with an interactive training program in response to the detection of repeated instances or a reliable single instance of pronunciation error.

26. 36. (new) A method of speech recognition as in claim ~~22~~, 33, wherein said user is presented with an interactive training program in response to the detection of repeated

instances or a reliable single instance of pronunciation error.

~~27-~~ 37. (new) A method of speech recognition as in claim ~~22~~, 33, wherein said database information comprising (i) digital representations of known audible sounds corresponding to proper pronunciations of phonemes and associated alphanumeric representations of said known audible sounds corresponding to proper pronunciations of phonemes and (ii) digital representations of known audible sounds corresponding to mispronunciations is formed by (i) having a person, who normally speaks said known audible sounds properly, speak said known audible sounds, and digitizing said known audible sounds spoken by said person who properly speaks said known audible sounds; and (ii) having a person who usually speaks said known audible sounds corresponding to mispronunciations and digitizing said known audible sounds spoken by said person who usually speaks said known audible sounds corresponding to mispronunciations.

38. (new) A method of speech ~~recognition~~ training using a microphone to receive audible sounds input by a user into a computing device coupled to said microphone, said computing device having a program with ~~a~~ database information comprising (i) digital representations of known audible sounds corresponding to proper pronunciations of phonemes and associated alphanumeric representations of said known audible sounds corresponding to proper pronunciations of phonemes forming a first database and (ii) digital representations of known audible sounds corresponding to mispronunciations forming a second database, comprising the steps of:

(a) receiving said audible sounds in the form of an electrical output of said microphone;

(b) converting said electrical output corresponding to a particular audible sound into a digital representation of said particular audible sound;

(c) comparing said digital representation of said particular audible sound to said digital representations of said known audible sounds in said first and second databases to determine a match with the one of said known audible sounds most likely to be the particular audible sound being compared to the sounds in said database; and

~~(d) outputting as a speech recognition output the alphanumeric representations~~

~~associated with said audible sound most likely to be said particular audible sound;~~

~~(e)~~ (d) outputting an error indication in response to a match with a known audible sound corresponding to a known mispronunciation; and

~~(f)~~ (e) in response to a determination of error corresponding to a known type or instance of mispronunciation, giving the user the option of receiving speech training or training said program to recognize the user's speech pattern; and

~~(g)~~ (f) in response to exercise of said option, presenting an interactive training program from said computing device to said user to enable said user to correct such mispronunciation.

39. (new) A method of speech recognition as in claim 38, wherein said database information comprising (i) digital representations of known audible sounds corresponding to proper pronunciations of phonemes and associated alphanumeric representations of said known audible sounds corresponding to proper pronunciations of phonemes and (ii) digital representations of known audible sounds corresponding to mispronunciations is formed by (i) having a person, who normally speaks said known audible sounds properly, speak said known audible sounds, and digitizing said known audible sounds spoken by said person who properly speaks said known audible sounds; and (ii) having a person who usually speaks said known audible sounds corresponding to mispronunciations and digitizing said known audible sounds spoken by said person who usually speaks said known audible sounds corresponding to mispronunciations.